

IN THE CLAIMS

Please amend claim 48 and cancel claims 49 and 66. Please add new claims 70-72. The current status of the claims is reflected in the below listing of claims.

1. - 47. (Canceled)

48. (Currently amended) A method for electroless deposition of a ~~nickel~~ nickel-phosphorus layer with internal compressive stress on substrates ~~a substrate~~, the method comprising:

contacting the ~~substrate~~ substrates with an electrolyte ~~comprising a nickel metal base salt~~ consisting essentially of:

nickel acetate ,

a hypophosphite reducing agent,

a complexing agent selected from the group consisting of 2-hydroxypropanoic acid, propanedioic acid, and a combination thereof ,

an accelerator, ~~and~~

a stabilizer , and

optionally other components selected from the group consisting of phosphorus, additional metals, and finely divided particles;

to thereby electrolessly deposit the ~~nickel~~ nickel-phosphorus layer with internal compressive stress on the

~~substrate~~ substrates, wherein the ~~nickel~~ nickel-phosphorus layer ~~with internal compressive stress~~ is electrolessly deposited on said substrates at a deposition rate of 7 $\mu\text{m/h}$ to 14 $\mu\text{m/h}$ with internal compressive stress throughout a throughput of 14 to 22 MTO;

wherein the throughput is between 70 g/L nickel and 110 g/L nickel;

~~wherein the nickel metal base salt of the electrolyte comprises an anion selected from the group consisting of acetate, formate, nitrate, oxalate, propionate, citrate, ascorbate, and combinations thereof;~~

wherein the nickel acetate has ~~metal base salt is added in~~ an initial concentration of 0.048 mol/L to 0.105 mol/L;

~~wherein the complexing agent is selected from the group consisting of 2-hydroxypropanoic acid, propanedioic acid, and a combination thereof;~~

wherein during electroless deposition, the electrolyte is buffered to a self-regulating pH between 4.0 and 5.2;

wherein the stabilizer is a metal salt wherein the metal is selected from the group consisting of lead, bismuth, zinc, tin, and combinations thereof and the metal salt comprises an anion selected from the group consisting of acetate, formate, nitrate, oxalate, propionate, citrate, ascorbate, and combinations thereof, and is present in a starting concentration of 0.1 to 2 mg/L; and

~~wherein optionally other components selected from the group consisting of phosphorus, additional metals, and finely divided particles are co-deposited.~~

49. (Canceled)

50. - 51. (Canceled)

52. (Previously Presented) The method of claim 48, wherein a first makeup solution is added to the electrolyte during electroless deposition, wherein the first makeup solution comprises a reducing agent, an accelerator, an alkaline buffer, and a complexing agent selected from the group consisting of 2-hydroxypropanoic acid, propanedioic acid, and a combination thereof.

53. (Previously Presented) The method of claim 52, wherein a second makeup solution is added to the electrolyte while practicing the method, wherein the second makeup comprises an accelerator, a stabilizer, and a complexing agent selected from the group consisting of 2-hydroxypropanoic acid, propanedioic acid, and a combination thereof.

54. - 58. (Canceled)

59. (Previously Presented) The method of claim 48, wherein the reducing agent is sodium hypophosphite.

60. (Canceled)

61. (Previously presented) The method of claim 48, wherein the complexing agent has a concentration of 70 g/L to 90 g/L.

62. - 65. (Canceled)

66. (Canceled)

67. (Previously Presented) The method of claim 48 wherein the accelerator is a sulfur-containing heterocycle.

68. (Currently amended) The method of claim 48 wherein the internal compressive stress of the nickel layer is between -10 N/mm^2 and -40 N/mm^2 ~~when~~ and the electrolyte is buffered to a self-regulating pH between 4.3 and 4.8.

69. (Currently amended) The method of claim 48 wherein the internal compressive stress of the nickel layer is between 0 and -15 N/mm^2 ~~when~~ and the electrolyte is buffered to a self-regulating pH between 4.6 and 5.2.

70. (new) The method of claim 48 wherein:
the nickel acetate yields 4-6 g/L nickel ions;
the reducing agent has a concentration of 25-60 g/L;
the complexing agent has a concentration of 25-70 g/L;
the accelerator has a concentration of 1-25 g/L.

71. (new) The method of claim 70 wherein:
the complexing agent concentration is 30 to 65 g/L;
the accelerator concentration is 2.5 to 22 g/L; and
the stabilizer starting concentration is 0.3 to 1 mg/L.